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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,402	06/02/2005	Didier Marsacq	123938	5898
25944 7590 09/16/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
LAIOS, MARIA J				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
09/16/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/535,402

**Applicant(s)**

MARSACQ ET AL.

**Examiner**

MARIA J. LAIOS

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 20050518
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9, 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Leddy et al (US 5,928,804).

With respect to claim 9, Leddy et al. discloses a fuel cell which generates electric power from oxygen and hydrogen ions (col. 4 lines 30-10). Leddy et al. discloses a first electrode and a second electrode. Between the first and second electrode is a magnetic composite material which contains magnetic micro bead material (permanent magnets which are aligned) an ion exchange polymer and platinum. (Claims 1-2 of Leddy et al.) Leddy et al. discloses the micro beads are aligned and are embedded in an ion exchange polymer and that the magnetic beads are gradient perpendicular to the electrode surface (col. 28 lines 17-20) thus the layer closest to the electrode contains the magnetic beads and moving further away the casting solution contains ion exchange polymer. Therefore the magnet will have one pole in the active layer and the other pole in the electrolyte (the poles are inherent to a magnetic material and col. 42 lines 3-5).

With respect to claims 11 and 12, the support network is equivalent to the ion polymer casting solution and since the magnetic particles are located in the casting layer it will have apertures for the magnets (col. 28 lines 15-30). Since the support material is an ion polymer it will allow for the passage of hydrogen ions and oxygen and is a non magnetic material fixed onto the layer of electrolyte.

With respect to claims 13 and 14, the micro beads are coated with platinum (claim 19 of Leddy et al and col. 41 lines 36-38).

With respect to claim 15, the magnetic particles are distributed in a plane parallel to the interface between the electrolyte and the active material since it is a coating on the electrode in a uniform manner (Figure 18B-the magnetic particles are distributed evenly)

With respect to claim 16, Leddy et al. discloses the particles can be incorporated with different surface area (col. 17 line 20) thereby giving a factual type distribution.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 10 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Leddy et al (US 5,928,804).

Leddy discloses the step of coating the electrode with a solution of ion exchange polymer, magnetic particles and solvent. Then orienting the magnetic particles with a magnetic field followed by evaporating the solvents (col. 46 lines 30-43) thereby leaving behind the magnets on the surface of the electrode. Therefore once the layer of electrolytic material is applied on top of the coating, the electrode and electrolytic material will inherently be equidistant from each other and along with the first and second poles of the magnet particles because the coating layer lies between electrolytic material and the electrode.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA J. LAIOS whose telephone number is (571)272-9808. The examiner can normally be reached on Monday - Thursday 10 am -7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. L./  
Examiner, Art Unit 1795

/SUSY N TSANG-FOSTER/  
Supervisory Patent Examiner, Art Unit 1795